

# Product Information Packet

November 8, 2016

Data shown is for the current revision model #. Ensure your nameplate model # matches.

<b>Model Number:</b>	<b>5KS286XAA168D</b>
<b>Catalog Number:</b>	<b>M9522</b>
<b>Instruction Manual:</b>	GEI-56128
<b>Connection Diagram:</b>	GEM2034E-FIG7
<b>Outline Drawing:</b>	4002B5828PDP5373

Accessory Connection Diagrams			
<b>Bearing Thermocouple:</b>	None	<b>Heater:</b>	None
<b>RTD:</b>	None	<b>Thermistor:</b>	None
<b>Thermostat:</b>	None	<b>Winding Thermocouple:</b>	None
<b>Bearing RTD:</b>	None		

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**Marks:**

<b>MODEL NUMBER:</b>	<b>5KS286XAA168D</b>	<b>Estimated Weight:</b>	510 Lbs
<b>Outline Drawing:</b>	4002B5828PDP5373	<b>Time Rating:</b>	CONT
<b>Connection Diagram:</b>	GEM2034E-FIG7	<b>Enclosure:</b>	TEFC
<b>Instruction Book:</b>	GEI-56128	<b>Encl Construction:</b>	841
<b>Design Code:</b>	28BD0153A	<b>Ambient Max(°C):</b>	40
<b>Type:</b>	KS	<b>Alt Ambient Max(°C):</b>	--
<b>Frame:</b>	286TSC	<b>Insulation Class:</b>	H
<b>Phases:</b>	3	<b>NEMA Design:</b>	B
<b>Poles:</b>	2	<b>Nominal Efficiency:</b>	92.4 %
<b>Output Power:</b>	30HP 22.2KW	<b>Guaranteed Efficiency:</b>	91.7
<b>RPM:</b>	3545	<b>3/4 Load Efficiency:</b>	93.4
<b>Voltage:</b>	460	<b>KVA Code:</b>	G
<b>Hertz:</b>	60	<b>Max KVAR:</b>	4.2
<b>Amps - FL:</b>	32.7	<b>Power Factor:</b>	93.0
<b>Service Factor:</b>	1.15	<b>Bearing - DE:</b>	6310ZC3
<b>Alt Service Factor:</b>	--	<b>Bearing - ODE:</b>	6310ZC3

**Enclosure is Totally Enclosed Fan-Cooled**

**Stamped Nameplate Notes:**

IEEE-STD-841-2009  
 DE BRG 50BC03JP30 ODE BRG 50BC03JP30  
 STAMP NP249A5564P051 AS BELOW:  
 MODEL:5KS286XAA168D S/N: XXX  
 CSA CERTIFIED CSA09.2216219 FOR EX NA IIC 200 C GC  
 CL1 ZONE2 AEX NA IIC 200C; CL1 DIV2 GRP ABCD 200C  
 IN -25C <= AMB <= 40C, 1.0 SF ON SINE-WAVE PWR  
 SURF TEMP 260 C AT 1.15 SF ON SINE-WAVE PWR  
 OR 200 C VT OR 215 C CT OR 215 C CHP PWM CONTROL  
 ALTERNATE RATING FOR PWM CONTROL 1.0 SF 40 C AMB  
 VT 0-60 HZ, CT 15-60 HZ, CHP 60-90 HZ.

**Additional Information:**

2P - TS EXTN  
 C/BOX 137 CU IN-1.50 NPT  
 "C" FACE AT DE ENDSHIELD ROUND FRAME  
 VERTICAL MOUNT SHAFT DOWN WITH DRIPCOVER  
 PAINTED FRAME ID & SHAFT,  
 FAN COVER INSIDE & ODE E/S OUTSIDE  
 ROUTINE AND 5 POINT VIBRATION TESTS INCL IN C/BOX  
 INPRO SEAL BOTH ENDS  
 E/SHLD GROUND STUD MTD ON DE C/BOX SIDE NEAR FOOT  
 ROTATE D.E. E/SHIELD 90 DEG. PER OUTLINE  
 SHAFT RUNOUT LIMIT .001" TIR  
 COPPER WASHER UNDER HEADS OF BEARING CAP BOLTS  
 APPLY TITE-SEAL (A50CD427A) ON BEARING CAP SCREWS, RABBETS,  
 AND PLUG THREADS

OIL RESISTANT SLEEVING ON LEADS

**Performance Characteristics**

1st Winding 1st Connection

**Design: 28BD0153A**

**Marks:**

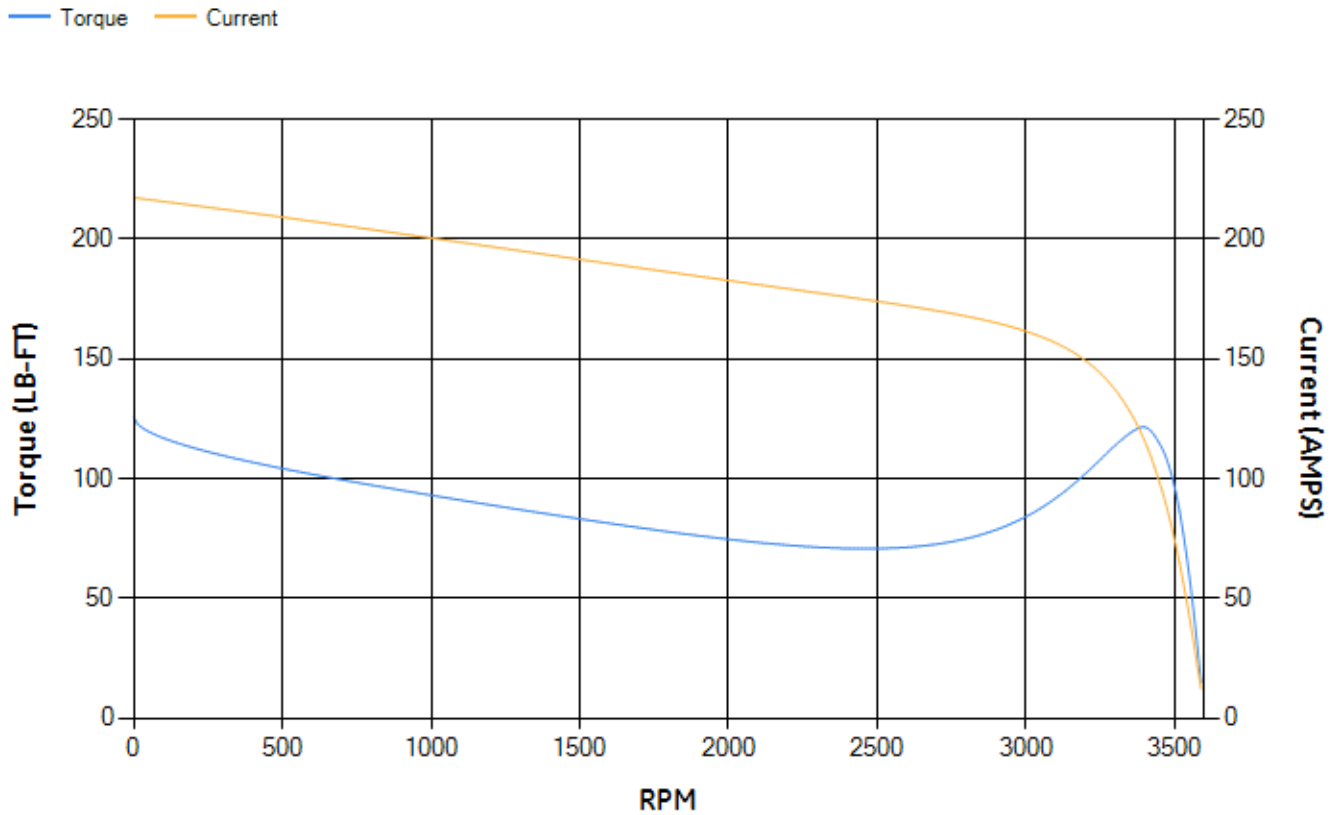
LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	91.42	91.93	92.8	93.37	93.43	91.04	0.00
% PF	92.42	92.7	92.9	92.36	89.48	77.1	9.71
AMPS	41.54	37.89	32.57	24.42	16.79	10	5.88

<b>TORQ(FL)#FT</b>	44.4	<b>TORQ(LR)%FL</b>	283.33	<b>TORQ(BD)%FL</b>	272.76
<b>AMPS(LR)</b>	217.27	<b>PF AT START</b>	0.43		

This motor is capable of two cold or one hot start with a maximum connected load inertia of 111 Lb-Ft Sq (4.67 Kg-meter Sq)at 100% voltage, where the load torque varies with the square of the speed. Acceleration time with maximum inertia and the above load type is 18 seconds. Safe stall time at 100% voltage is 38 seconds cold, 21 seconds hot. Rotor inertia is 3.25 Lb-Ft Sq (0.14 Kg-meter Sq).

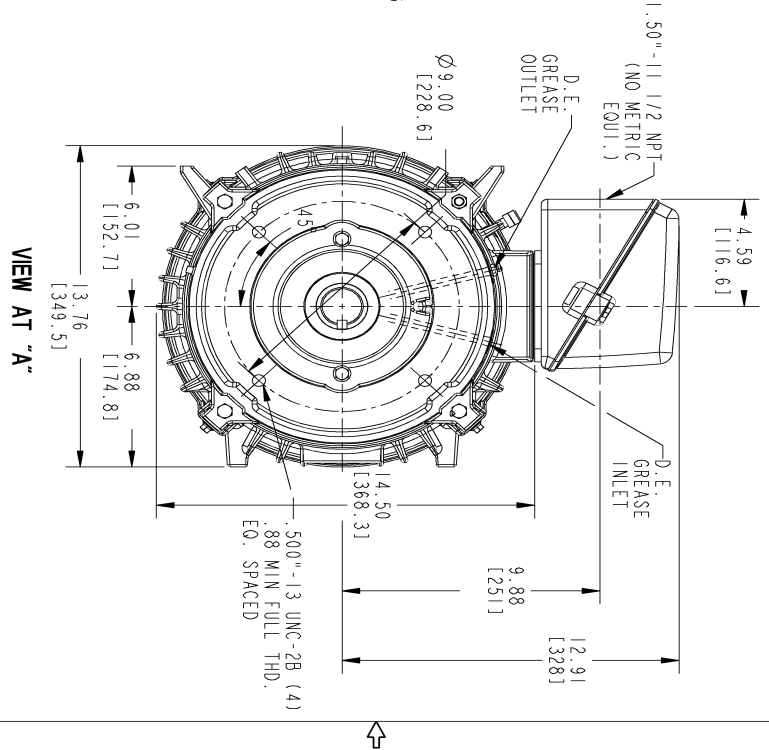
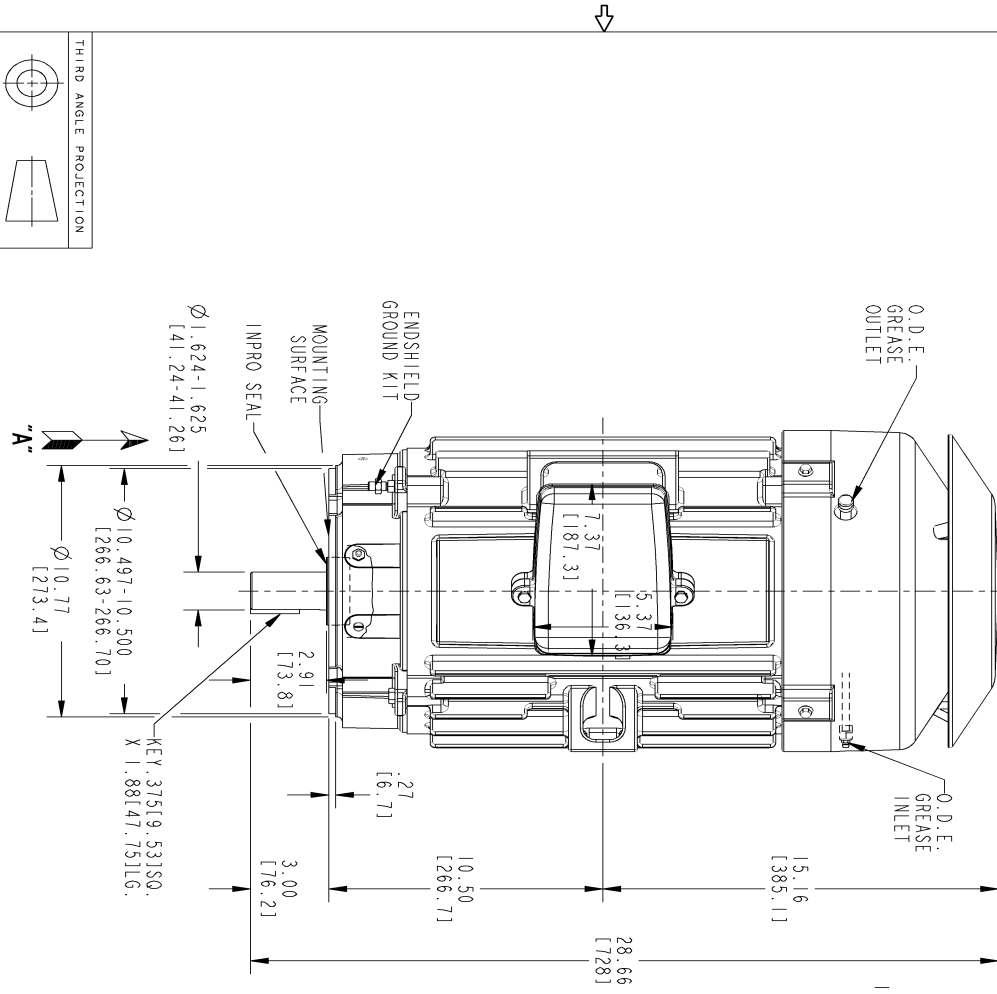
<b>Open Circuit A-C:</b>	1.041	<b>Short Circuit D-C:</b>	0.013
<b>Short Circuit A-C:</b>	0.025	<b>X/R Ratio:</b>	5.017
<b>Stator Slots:</b>	48	<b>Rotor Slots:</b>	38

**Speed Torque Current Curve (First Connection, First Speed)**



Marks:

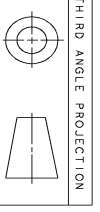
- NOTE 1: CONDUIT BOX MAY BE ASSEMBLED WITH ENTRANCE UP, DOWN OR TO EITHER SIDE.
- NOTE 2: F1 ASSEMBLY AS SHOWN. F2 ASSEMBLY CONDUIT BOX ON OPPOSITE SIDE FROM SHOWN LOCATION.
- NOTE 3: MOUNTING SURFACES TO BE SQUARE AND CONCENTRIC WITH SHAFT WITHIN .004 T.I.R.
- NOTE 4: SHAFT RUNOUT WILL NOT EXCEED .001 T.I.R.
- NOTE 5: ALL DIMENSIONS ARE IN INCHES. BRACKETED DIMENSIONS ARE IN METRIC (MILLIMETERS)



SIGNATURES	DATE	REV	SHEET																																													
<table border="1"> <tr><td>MODEL</td><td>PLABHU</td><td>01/09/2013</td></tr> <tr><td>DETAIL</td><td>PLABHU</td><td>01/09/2013</td></tr> <tr><td>CHECKED</td><td>VIJAY</td><td>01/09/2013</td></tr> <tr><td>ENGRS</td><td></td><td></td></tr> <tr><td>QC</td><td></td><td></td></tr> <tr><td>QUALITY</td><td>PLABHU</td><td>01/09/2013</td></tr> <tr><td>ISSUED</td><td></td><td></td></tr> <tr><td>SOLD MODEL</td><td>4002B5828PDP5373</td><td></td></tr> </table>	MODEL	PLABHU	01/09/2013	DETAIL	PLABHU	01/09/2013	CHECKED	VIJAY	01/09/2013	ENGRS			QC			QUALITY	PLABHU	01/09/2013	ISSUED			SOLD MODEL	4002B5828PDP5373		<table border="1"> <tr><td>TITLE</td><td>INDUCTION MOTOR OUTLINE</td></tr> <tr><td>DRIP COVER, IMPROSEAL, EKT</td><td></td></tr> <tr><td>FMK5286TSC TFC "C" FACE FOOTLESS IEE-94I</td><td></td></tr> <tr><td>SIZE DRAWING</td><td>4002B5828PDP5373</td></tr> <tr><td>REV</td><td>1</td></tr> </table>	TITLE	INDUCTION MOTOR OUTLINE	DRIP COVER, IMPROSEAL, EKT		FMK5286TSC TFC "C" FACE FOOTLESS IEE-94I		SIZE DRAWING	4002B5828PDP5373	REV	1	<table border="1"> <tr><th>REV</th><th>DESCRIPTION</th><th>DATE</th><th>APPROVED</th></tr> <tr><td>1</td><td>ISAC#15-1066</td><td>11/03/15</td><td>HAREHARAN</td></tr> </table>	REV	DESCRIPTION	DATE	APPROVED	1	ISAC#15-1066	11/03/15	HAREHARAN	<table border="1"> <tr><td>SCALE: 0.220</td><td>REF. No: 4002B5828PDP5362</td><td>SHEET 1 of 1</td></tr> </table>	SCALE: 0.220	REF. No: 4002B5828PDP5362	SHEET 1 of 1
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SIZE DRAWING NO. **4002B5828PDP5373**

REV.	DESCRIPTION	DATE	APPROVED
1	ISAC#15-1066	11/03/15	HAREHARAN



THIRD ANGLE PROJECTION

Marks:

**Connection Diagram**  
**GEM2034E-FIG7**



End shield Assembly		
Part Description	DE Side Part#	ODE Side Part#
End Shield	128D6206PL1	4004D5284SE1
Bearing	235A2608AA01	235A2608AA01
Slinger/Inproseal	235A4575GC20	4002B5914AG5

Fan & Fan Cover Assembly	
Part Description	Part#
Fan	159C6704G02
Fan Cover	4003C5528BN-G01

Conduit & Accessories Box Assembly	
Part Description	Part#
Conduit Box	4002B5728PA-G01

Mechanical Accessories	
Part Description	Part#
Brake	
Tachometer	